the general science journal

Longitudinal Virtual Waves

António Saraiva – 2008-03-26
ajps2@hotmail.com

Visible photon: $f = 5\times10^{14}\,Hz$

$$kf^2 = c^2 - w^2 = 2c\Delta w \quad ; \qquad \Delta w = c - w$$

Virtual photon speed:

$$(c^2 - ww_0)^2(c-w)^2 w_0{}^3 = -2ic^2w^3(c-w_0)^2(c^2 - w_0{}^2)$$

$$w_0 = iV_0 \; ; \qquad V_0 = \frac{2c^3}{\Delta w^2} = \frac{8c^5}{k^2 f^4} \quad ; \qquad V_0 = 8.5\times10^{51}\,ms^{-1}$$

Virtual electron: $f = 1.2\times10^{20}\,Hz$

$$V_0 = 2.1\times10^{30}$$

Creation of longitudinal virtual waves

$$V_0 = \frac{E_0}{B_0}$$

$$\vec{E}_0 = \frac{Q_0}{4\pi\varepsilon_0 R^2} \quad ; \qquad \vec{B}_0 = \frac{\mu_0}{4\pi}\frac{I_0 l_0}{R^2}$$

$$V_0 = \frac{Q_0 c^2}{I_0 l_0}$$

$$Q_0 = CV\left(1 - e^{-t/RC}\right) \quad ; \qquad I_0 = \frac{V}{R} e^{-t/RC}$$

$$\frac{Q_0}{I_0} = CR \frac{1 - e^{-t/RC}}{e^{-t/RC}} \quad ; \qquad t = 5RC \quad ; \qquad f = \frac{1}{5RC}$$

$$\frac{Q_0}{I_0} = \frac{29.5}{f}$$

$$V_0 = \frac{c^2}{l_0} \frac{29.5}{f} \quad ; \qquad l_0 = \text{Antenna length}$$

The speed of virtual waves is always greater than light speed.